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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,235	11/07/2001	Jennifer L. Lee	55393US011	1507
32692 7590 10/15/2007 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			EXAMINER BERMAN, SUSAN W	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			10/15/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

**Application No.**

10/008,235

**Applicant(s)**

LEE ET AL.

**Examiner**

/Susan W. Berman/

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2007.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8-24,26,27,64-71,76 and 77 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 8-24,26,27,64-71,76 and 77 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_.

***Response to Amendment***

The rejection of claims 8-27, 64-73 and 76-77 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement is withdrawn.

***Response to Arguments***

Applicant's arguments filed 07/23/2007 have been fully considered and found persuasive.

WO '787 teaches tri- or higher functional material that are alkoxylated acrylates (page 11) and are now excluded from the instantly claimed compositions. WO '787 teaches that the disclosed compositions preferably contain 10-30% by weight tri- or higher function materials in the reactive liquid material (page 16). WO '787 teaches selecting mono-, di- and tri- and higher functional components so that the average number of radiation polymerizable unsaturated carbon-carbon double bonds is 1.25 to 2 (page 17).

New grounds of rejection are set forth herein below.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 8-24, 26, 27, 64-66 and 68-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/27171. WO '171 discloses radiation curable ink jet ink compositions having a viscosity no greater than 35 mPa.s at 30<sup>0</sup> C and comprising an aliphatic (meth)acrylate functional macromer, a reactive acrylate monomer, a photoinitiator and a colorant. The inks are

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said to have excellent adhesion to acrylate substrates. Preferred monomers, including hexanediol diacrylate, tetrahydrofurfuryl acrylate, isobornyl acrylate and ethoxyethoxyethyl acrylate, in amounts from 25-70% by weight are taught on page 6. Examples 2 and 4 employ EEEA, HDDA and THFFA. Examples 5, 6 and 8 employ THFFA and HDDA as reactive monomers. Example 7 employs IBA, THFFA and HDDA as reactive monomers.

It would have been obvious to one skilled in the art at the time of the invention to provide ink compositions comprising the components set forth in the instant claims selected from the components for the ink compositions taught by WO '171. WO '171 provides motivation by using combinations of monomers in the examples. One skilled in the art at the time of the invention would have been motivated by a reasonable expectation of providing ink compositions having the desired adhesion to acrylate substrates, viscosity, hardness and durability when cured taught by WO '171.

With respect to claims 14, 69 and 71, WO '171 teaches that the monomers function as diluents for the macromonomer, pigment binders, viscosity reducers and as crosslinking agents and that the amount of each monomer may be varied to provide a composition with the desired combination of properties (pages 6-7). It would have been obvious to one skilled in the art at the time of the invention to determine the amounts of each kind of monomers to employ in order to provide the desired properties, such as viscosity or crosslinking, in a particular ink, as taught by WO '171.

With respect to claims 23 and 24, It would have been obvious to one skilled in the art at the time of the invention to employ the instantly claimed monomers in the compositions taught

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by WO '171 because they are considered to be obvious variants of the monomers specifically taught.

With respect to claims 66 and 70-71, WO '171 does not mention the elongation of the cured ink composition. However, the disclosed compositions would be expected to provide the instantly claimed elongation because compositions comprising the same components are taught as are instantly claimed and would be expected to provide the same properties when cured.

The instant claims require that the composition is free of an alkoxyated, radiation curable monomer comprising main-chain alkoxyated functionality. WO '171 does not require the presence of any alkoxyated acrylates and thus teaches compositions corresponding to the instantly claimed compositions wherein the amount of alkoxyated radiation curable monomer having main chain alkoxyated functionality is zero. It would have been obvious to one skilled in the art at the time of the invention to provide compositions as taught by WO '171 that are free of alkoxyated acrylates because WO '171 does not require that such monomers be present.

The instant claims require that the composition is free of trifunctional monomers having a plurality of radiation curable monomers, although the composition comprise at least one multifunctional monomer having a plurality of radiation curable moieties. WO '171 teaches that trimethylolpropane triacrylate can be used as reactive acrylate monomer but uses only monoacrylates and diacrylates in the examples. It would have been obvious to one skilled in the art at the time of the invention to select compositions from those disclosed by WO '171 comprising a monofunctional material and a di-functional material in the reactive liquid material since a mixture of monofunctional and a di-functional acrylates are used in the examples in WO '171.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 8-24, 26, 27, 64-71 and 76-77 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 6,534,128. Although the conflicting claims are not identical, they are not patentably distinct from each other because the components of the compositions meeting the definitions set forth in the claims of US '128 and the instant application can be the same components although the definitions in the claims are not identical. The aliphatic urethane acrylate oligomers set forth in the claims of US '128 correspond to the oligo/resin set forth in the instant claims. The radiation curable reactive diluent set forth in the claims of US '128 considered in view of the disclosure of components providing the reactive diluent comprises the instantly claimed reactive diluent because the same components as disclosed are set forth in the instant claims.

Claims 8-24, 26, 27, 64-71 and 76-77 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No.

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6,558,753. Although the conflicting claims are not identical, they are not patentably distinct from each other because the components of the compositions meeting the definitions set forth in the claims of US '753 and the instant application can be the same components although the definitions are not identical. The oligo/resin is set forth in the claims of US '753 and in the instant claims. The radiation curable reactive diluent set forth in the claims of US '753 considered in view of the disclosure of components providing the reactive diluent comprises the instantly claimed reactive diluent because the same components as disclosed are set forth in the instant claims.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Susan W. Berman/ whose telephone number is 571 272 1067.

The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB  
10/2/2007

/Susan W Berman/  
Primary Examiner  
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